March 2017

Volume 2, Issue 3

Lincoln County Beekeepers Association Newsletter

In this issue:

"The honey bee is more honored than other animals, not because she labors, but because she labors for others."

-St John Chrysostom

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rick@monroegen.org

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blackrockfarms@aol.com

Treasurer - Eddie White
cewhitebeekeeper@charter.net

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bethnoles@bluebikerealty.com

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We are Beekeepers…

This is the official newsletter for the Lincoln County Beekeepers Association, a non-profit organization dedicated to the well-being of honey bees and to the fields of beekeeping, apiculture, research, and education. We are a diverse bunch of individuals who share a fascination for the honey bee and its workings. Our members range from full-time beekeepers and pollinators with thousands of hives to hobbyists involved in back-yard beekeeping. Some members do not even keep bees, but are fascinated by the six legs and four wings of *Apis mellifera*.

Meeting Notes:

Normally I like to sum up our most recent meeting here but a very interesting question was brought up recently that I would like to share instead.

At the Spring meeting one of the speakers told us that honey bees do not see color while flying - that they "turn off" the color reception using only black/white/greyscale. His point was that having hive boxes of various colors was pointless since the bees would not see the colors while flying. Assuming that he is correct about "turning off" the color perception while flying distances, wouldn't a bee turn it back on as it approached its destination - forage site or "home" - in order to have better ability to locate the flowers it seeks or the box it is returning to? I would think that boxes of different color would still be distinguishable even in greyscale.

I have not been able to find any reference to support the statement, though. *Bee Culture* tells me "Bees also have the ability to see color much faster than humans. Their color vision is the fastest in the animal world-five times faster than humans. So while we may have trouble distinguishing one flower in a group from another, bees don't. They see each individual flower." . . . . "When we drive on a highway and look out the window at the flowers by the roadside, we usually can't distinguish one flower from another. The car is moving so fast that the flowers blend in to one another and we see a blur of color. Bees have a far higher "flicker" threshold. They can see individual flowers while traveling at a high rate of speed.", and "Worker bees have 6,900 facets in each eye, and drones have 8,600 facets. Every facet is connected to a tiny tube. Each of these units, called an ommatidium, contains a lens (facet), a cone of visual cells and pigment cells that help separate it from its neighbor cells. A bee is able to see color, because each of these tiny tubes contains eight cells that respond to light."

I find little on this in *Honey Bee Biology and beekeeping,* but in *Form & Function in the Honey Bee,* Chapter 2 never indicates that a honey bee "turns off" the ability to perceive color.

Am I misunderstanding the ability of the honey bee to perceive color and use it in foraging and also in locating "home"?

See response on next page

NEXT MEETING: April 1Xth @ 7pm

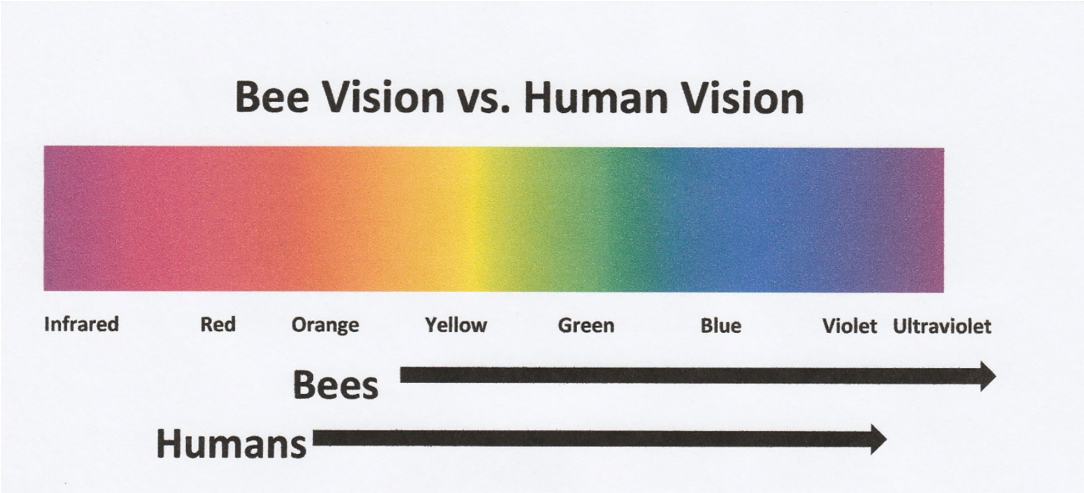
James Warren Citizen Center, 115 West Main Street, Lincolnton, NC 28092

I've never heard or read anyone saying that bees turn off their color vision at will, particularly while flying. I Googled the subject and found plenty of information that jives with what I've learned in the past. I can't come up with a reason (adaptation?) that color vision on/off would be of survival value. The talk about whether hive box colors can be seen by bees is a curious application of the speaker's principle. I vaguely remember a study from-way-back-when where different geometric shapes and colors were put onto the entrances of hives. Bees can differentiate between shapes, colors, and combinations of the two. They make those determinations while on the wing.

I re-read the *Bee Culture* article and felt annoyed by a number of the statements. From my Psych education in sensation/perception: In humans, the "flicker threshold" refers to our visual system's limit at which a flickering light appears to be a solid light. Experiments we ran in school examined how that rate changes as you move the flickering light into a person's peripheral vision. Humans have a pretty good ability with flickering lights. Television and films are a good example of flicker that appears like a solid picture. If I think about flying through the air head first, the objects in the distance appear solid and clear. Objects passing by me in my peripheral vision blur as their image passes from my focal vision to the less dense receptors of my peripheral sight. 6,900 or even 8,600 facets is much, much lower than human receptor cells: 120 million rods and 6 million cones in each human retina. Our system has one lens per eye, not 6,900. Our eyes allow an image to sweep across our 126 million receptors. In worker compound eyes, the image is broken into 6,900 pieces by all the individual lenses. Their resolution is way worse than ours. Nerve conduction speeds can be affected by a number of factors. The nerve materials, length of transmission, and transmission/inhibition connections to name a few of those factors. I've said in talks that the nerves at the ocelli are that fastest conductors in the bee's body (got it from Form and Function in the Honey Bee, I think). I bring that up only because many of those nerves are directly connected to structures in the thorax and that lends itself to the argument that the ocelli are involved in navigation and body position during flight. I disagree with the writer of the *Bee Culture* article about the bees visual system being a "super power". I would agree that their systems for sensing minute chemicals in the air is way beyond our abilities, but not their vision.

I'm thinking that the person who says bees turn their color vision on and off is the one who misunderstands some of the honey bee's visual system. Definitely let me know if you run across proof otherwise.

Thank you Ralph Harlan and Greg Clements for sharing your thoughts and research on this.



Volunteer Opportunities:

****Any events, programs, etc you would like announced need to be emailed before the next monthly meeting*****

Spring is coming and local educational presentations will start. Shot an email to bethnoles@bluebikerealty.com if you are interested in joining in on any group presentations.

Member News:

If anyone rented the extracting equipment and forgot to return the fume board, PLEASE return to Dick Walker ASAP!

Announcements:

- Check out the NCSBA website for this months quizzes and new games. Each month a new quiz for all levels to test your knowledge and or study for the next levels test.
- Summer Conference will be held in Winston-Salem NC on July 13-15th. Please check the NCSBA website for more details. Testing will also be held at the conference fro anyone looking to venture to the next level in the Master Beekeeping Program.
- We need your tried and true recipes using honey for our newsletter recipe section! Pictures to accompany them are great as well! Send to bethnoles@bluebikerealty.com or reply to the newsletter email.

FOR SALE: Taylored Creations

Chapstick $3 / tube
Everyday Hand & Body Cream $5 / 4oz jar, $10 / 8oz jar
Dry Skin Cream $5 / 2oz tin, $10 / 4oz tin, $19 / 8oz tin
Pain Cream for Sore Muscles & Joints $6 / 2oz metal tin, $12 / 4oz tin, $20 / 8oz tin
Medic Stick for Cuts, Bites, Stings, Etc $3.50 / tube

by Ashley Worley 704-578-0380 ashelyworley@gmail.com

Extracting Equipment Rental:

Call Dick Walker @ 704 575 0925
wizz22789@aol.com

Rental fee is $7 per day
Extractor, hot knife, uncapping tub, strainers etc

Cheerios is giving away 100 million wildflower seeds to help save the bees...

By Mentalfloss.com

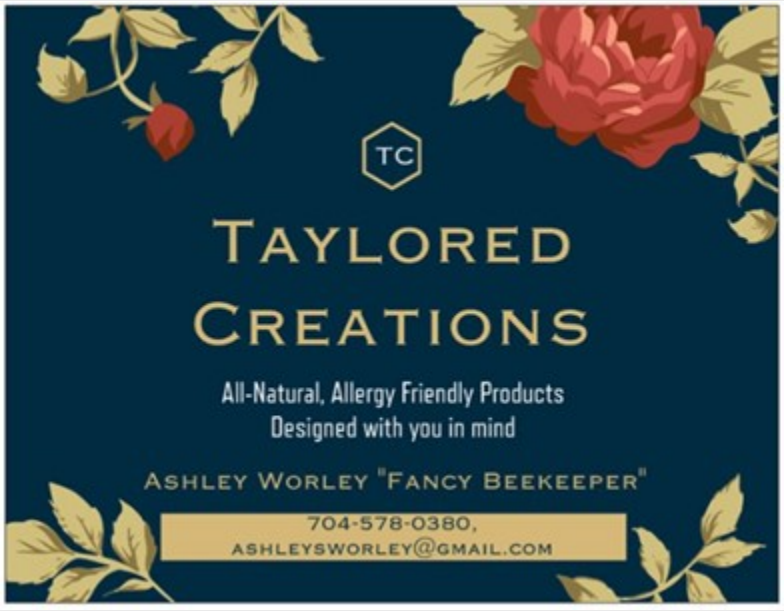
Buzz the bee has disappeared from many cereal boxes across North America. The peppy mascot's conspicuous absence is part of a campaign to raise awareness about the plight of real honeybees. To further spread the word, General Mills is giving away 100 million wildflower seeds.

Bees of all stripes are currently in big trouble. Increased pesticide use, widespread parasites, and the development of formerly wild spaces have all taken big bites out of bee populations. This is bad news, even for people who don't care about bugs— honeybees are responsible for pollinating 70 out of the 100 biggest human food crops. The folks at General Mills have been trading on Buzz's image for decades and figured it was time to give a little something back. "We have a bee as our mascot and honey in our product, so we thought somebody should be championing this cause, and we thought that we could be a great champion," General Mills Canada marketing director Emma Eriksson told the CBC when the campaign began last year.

The company has pledged to create more bee habitats in its own supply areas, incorporating wildflowers into 3300 acres of its oat farms by 2020. It's also making it easy for cereal lovers to do the same at home. Sign up on the Cheerios website to get a packet of 500 free wildflower seeds to plant in your community. The seeds are going fast, with 72 million claimed by press time. The wildflower seeds are not region-specific, a representative from General Mills told mental_floss, so we suggest that you check your seed packet to ensure the species inside are local to your area.

What are your thoughts on this knowing that General Mills is a supporter of Monsato and GMO seeds??

In The Spotlight…



About Me

When my children were born, I was inspired to combine my love for gardening, honey bees, and body care products to create products I could feel good about my family using. Friends and family began sharing my products with others, and I soon realized many other people wanted to feel good about the body care products they were using as well. Living with Celiac Disease inspired me to make all my products free from common allergies, making them safe for sensitive souls as well. It is my desire that my products will bring you nourishment and peace of mind, like they have for me and my family.

My Products

Dry Skin Relief - Deeply nourishing and great for hands, body and face, and great for psoriasis and eczema
Hand & Body Cream - Silky smooth for everyday comfort
Medic Stick - Great for bites, bruises, burns, cuts, scrapes, and stings
Nourishing Beeswax Chapstick - Smooth blend of honey and beeswax for all day comfort
Pain Cream for Sore Muscles and Joints - Athlete and Chiropractor approved
*Custom Products made upon request

There is beauty and healing in the natural, if we but have the heart to pursue it. - FB

Ashley Worley "Fancy Beekeeper"
Owner & Designer
704-578-0380, ashleysworley@gmail.com

LCBA would love to include your favorite beekeeping stories, pictures or interesting articles that you find worthy of sharing.

Flower Report (as of 3/15/17) By Ralph Harlan

The recent cold has pretty much stopped the nectar we had. I still see dandelions, some camellia, some henbit, vinca and Lenten rose. I hear that some maples are still in bloom but the ones I see are like the elms: past the bloom and well into seed production. There are a few blooms left on the rosemary, but I do not see bees looking at them. Redbud is well into bloom and does not seem fazed by the cold. Bluets are still blooming well, but I do not have any clover yet. Forecasts are showing lows to be in the 30's for the coming week, and then if we are lucky we won't see worse. I expect that the flowers will take several warm days before we see new bloom and nectar production. From what I can see of the poplar, the buds are just beginning to form and do not appear to be damaged by the cold so far. I saw blueberries beginning to bloom a week ago, but have not been back to see how they fared.

Hive Report (as of 3/15/17) By Ralph Harlan

I took a quick look in many of my colonies today after the temperature reached 55°, and was – for the most part – pleasantly surprised. Several of the smaller hives had already gone through the bit of nectar they had put away so far, but had fondant to make it through the cold period when I was not able to lift the lid to inspect/refill. Many of my hives had the fondant between boxes which seems to have made the difference since it was within reach as the clusters became more compact during the cold. So far I have not had a swarm and did not have any colonies with queen cells. After the prolonged cold/snow/rain/etc., I did anticipate that some of the colonies would have developed cabin fever and be ready to swarm as the temperatures made it past 55°. Because the best temperature I saw today was only 61°, I tended to work those colonies that were 3 boxes tall or less. Those I can do a quick check by lifting one end of the upper boxes one at a time and looking at the underside of the frames for swarm cells. When I am tilting more than 1 box stacked over another box I am not as confident in my ability to lift, tilt, hold, and still look under the load and not have 1 or both boxes slip. Sometimes with 2 boxes tilted over the 3rd I think I should be singing – like the tin man – "If I only had a brain".

For the near term, I think it best to monitor the food supplies carefully in each hive since we won't have a lot of nectar coming in and the colonies are fairly strong. Tomorrow is supposed to be 75° so if it is not raining I will be out checking the pantries of my remaining colonies. I still have a small amount of fondant, but I will likely carry some simple syrup to put on any that is really light. I won't rule out that I start seeing swarm cells in some of those colonies as they were going gangbusters before the frost. When a colony is strong at this time of the year and has a lot of capped brood (and also almost capped brood) and then no one can get out foraging for days, they think they are ready to swarm and will create and tend swarm cells waiting for the first warm day. We had about a week of cold so we are approaching the magic 10 day mark for them to leave. Have swarm traps in place and ready even if your colonies are not showing symptoms. You just might catch the swarm issuing from a colony nearby – managed or feral.

I am not "checkerboarding" yet even with my strong colonies. Nor am I grafting queens. I want to be sure that we are past the cold snaps enough that I do not kill brood – especially queen cells – when the temps drop suddenly. I am watching that no one runs out of space in any colony and begins to feel that over yonder is a better place for the adults in the house. As nectar starts coming back in you should remember that it only takes about 7 days for a strong colony to turn a shallow box of foundation into a super of capped honey!

May your poplar flow this year be wonderful!

Test Your Knowledge:

Certified Level:

1. Prior to the discovery and use of the Langstroth moveable frame hive, the only way to harvest honey or wax was to kill the bees or drive them from the hive.
    - True
    - False

2. When a worker lays eggs ("a laying worker"), they would always develop into drones.
    - True
    - False

3. Black bears are not a serious threat to bee hives in North Carolina.
    - True
    - False

4. No medical treatment is necessary for chalkbrood; your colony should recover on its own.
    - True
    - False

5. Chalkbrood is a common fungal disease that affects bee larvae.
    - True
    - False

6. European foulbrood (EFB) isn't as dangerous as American Foulbrood (AFB) because the bacteria that causes EFB doesn't form persistent spores.
    - True
    - False

7. Beeswax is the substance secreted by glands located on the worker bee's thorax.
    - True
    - False

8. A "queen cage' is a piece of beekeeping equipment that is used to keep the queen from laying eggs in honey supers.
    - True
    - False

9. The photograph here is a piece of beekeeping equipment. From the choices below, what is it used for?

    - making indentations in wax foundation to simulate cell shapes made by bees
    - crimping wire, to make it tighter, when installing wire onto foundation (correct answer)
    - pinching the ends of nails that hold frames together
    - dipped in hot wax, then rolled across the upper bar of frames for top-bar hives

10. Of the following choices, which direction is generally best for your colonies entrance to face?
    - West
    - Northeast
    - Southeast (correct answer)
    - Northwest

Test Your Knowledge:

Journeyman Level:

1. When a colony begins to whiten the combs along the tops of the frames of the brood chamber, or supers, with newly secreted wax - it is an indication that the colony is making preparations to swarm.
    - True
    - False

2. Congestion in the honey supers is the primary cause of swarming.
    - True
    - False

3. A swarm typically leaves its parent colony and clusters on a tree branch about two miles away.
    - True
    - False

4. One of the negative effects of Nosema disease is that nurse bees have smaller hypopharyngeal glands, and slower gland development overall - resulting in the production of less brood food and rearing of less brood.
    - True
    - False

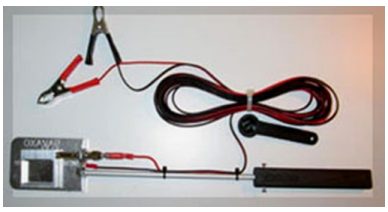
5. A drone congregation area is usually located inside the hive, near the entrance.
    - True
    - False

6. If a virgin queen is prevented from going on a mating flight, she will lose the urge to mate in approximately what amount of time?
    - 1 week
    - 3 weeks
    - 8 weeks
    - never

7. Worker, Drone, and Queen larvae are susceptible to AFB for up to how many days following egg hatch?
    - 3 days
    - 7 days
    - 14 days
    - indefinitely

8. Nosema (both apis and ceranae) effects what stages of honeybee development?
    - only adult bees
    - only pupae and adult bees
    - larvae, pupae, and adult bees
    - eggs, larvae, pupae, and adult bees

9. What is this piece of equipment?



10. The NCSBA offers many programs. How many of them can you name? List as many as you can recall. MUST name at LEAST FOUR.

Test Your Knowledge:

Master:

1. The International Color Code for Queens designates the last digit of the year by the use of a specific color. Match the colors with the year ending designation. (2 points)

Years ending in 0 and 5	
Years ending in 1 and 6	a. Blue
Years ending in 2 and 7	b. White
Years ending in 3 and 8	c. Red
Years ending in 4 and 9	d. Yellow
	e. Green

2. When you "reverse" a colony to maximize spring build-up and minimize swarming, how do you arrange the brood in the colony? (2 points)

Capped brood in the LOWER brood chamber and open brood in the UPPER chamber

Capped brood in the UPPER brood chamber, and open brood in the LOWER brood chamber

All brood in the UPPER brood chamber, and all honey frames in the LOWER brood chamber

All honey frames in the UPPER brood chamber, and all brood in the LOWER brood chamber

3. TWO PART QUESTION: What is your favorite book about beekeeping or honey bees?

And WHY? { how does it hold it's appeal to you as a Master Bkpr. applicant? }

one point for naming the book / up to 3 points for describing why you liked it best (4 points)

4. What is meant by a "walk-away split"? How is it done? (3 points)

5. Describe a "trap-out". What is it? How is it done? What are the advantages and/or disadvantages of this? (5 points)

Answers: March 2017

Certified:

1. TRUE **2.** TRUE

3. FALSE **4.** TRUE

5. TRUE **6.** TRUE

7. FALSE **8.** FALSE

9. CRIMPING WIRE

10. SOUTHEAST

Journeyman:

1. FALSE **2.** FALSES

3. FALSE **4.** TRUE

5. FALSE **6.** 3 WEEKS

7. 3 DAYS **8.** ONLY ADULT BEES

9. OXALIC ACID VAPORIZER

10. 1. Master Beekeeper Program 2. GAP (Golden Achievement Program) 3. NC Honey Bee Exhibit at the NC Zoo 4. Honey Sales at the NC State Fair 5. NC Certified Honey Producer Program 6. State Meetings (seminars) Spring and Summer 7. Contests & Judging: Honey (various categories); Wax Products; Photography; Cooking with Honey 8. Awards: Person of the Year / Co-operative Ext. Worker of the Year / McIver-Hass Lifetime Achievement Award 9. Audio / Visual Library 10. DAV: honey sales support Veterans

Master:

1.

	Correct answers
Years ending in 0 and 5	Blue
Years ending in 1 and 6	White
Years ending in 2 and 7	Yellow
Years ending in 3 and 8	Red
Years ending in 4 and 9	Green

2. All honey frames in the UPPER brood chamber and all brood in the LOWER brood chamber

3. Graders are to consider how this response is relavant to the level of a Master Beekeeper.

4. Taking a few frames of eggs, larva, capped brood, and nurse bees from a strong colony, and placing them into a NUC or queenless colony. Feed them. Let the bees create queen cells from the youngest larvae and basically let them make a split for you.

5. 1.) A trap-out is a lengthy process of removing a colony of honey bees from a structure, tree, or wall. 2.) It is generally used when destruction of structure is not permissible or plausible. 3.) HOW TO: A. The beekeeper studies the space where the bees are living and tries to find all the entrances and exits. Once all the openings are found, the beekeeper seals off all except for one. B. Over the remaining opening, the beekeeper installs a one-way bee escape. This allows the bees to leave the nest, but prevents them from returning. C. Very close to the one-way opening, the beekeeper sets up a regular hive, complete with honey pollen, brood a queen and just enough workers to care for the brood and queen. D. With any luck, the returning foragers that are unable to enter their old hive, will eventually take up residence in the new one 2.)DRAWBACKS / DISADVANTAGES to using this TECHNIQUE: 2.A. The system is less than perfect for a number of reasons: 2.B. The process is extremely slow. It takes a month or longer. 2.C.Only foragers and drones are caught by the one-way trap. The nurse bees won't be caught until they become foragers. The brood won't be caught until it hatches, and goes through all the stages that precede foraging. Many home and business owners with a bee nest don't want to wait this long to get rid of it. 2.D. The queen usually dies within the structure, along with any unattended brood. Rotting brood may smell very bad. 2.D. Honey stores, if any are left inside.. have been known to leak and drip down inside walls. 2.F. Combs and honey left inside may attract vermin. 2.G. The beekeeper must already have a queen-right hive to use for the trapped bees. 2.H. The bees the beekeeper collets are at the end of their lives (ie. they are foragers, not nurse or comb builders.) 2.I. The owner of the structure is left with a mess. ANSWERS: see www honeybeesuite com

Library:

LCBA has started library as a resource for members only. At each meeting you may check out a book, video or any resource item for the 4 weeks until the next meeting when you can return the item. Please make sure to sign out the item on the board inside the closet! Feel free to donate to any unneeded books or items to our resource closet at any time!

The Hive and The Honey Bee

The ABC & XYZ of Bee Culture

Hive Management

Natural Beekeeping

Honey Bee Biology

Swarm Essentials

Successful Queen Rearing

Garden Pants for Honey Bees

Honey in the Comb

Honey handbook

Beeswax Alchemy

Presentation Resources:

Teaching Hive

Photo Board

Flowers, fruits, veggies for displays

Kids games

Plastic Honey bee

Other Items:

Brochures

Coloring pages

Crayons

Catalogs

Local Breeder List:

Billy Boyd	5803 Old Monroe Rd	Indian Trail	704 821-7310	russian bees	
Bob Doty	6325 Stirewalt Rd	Kannopolis	704 934-2640 704 651-2555	nucs-minn hyg	odiedody@ctc.net
Ray Revis	P O Box 2520	Marion	828 652-3524	nucs/queens-russians	
Gerry & Libby Mack	121 Hermitage Road	Charlotte	704 953-0565	nucs - russians	
Ralph Harlan	1295 Brevard Place Rd	Iron Station	704 807-6207	nucs	harlanmgmt@live.com
Wayne Hansen	8004 Southway Rd	Charlotte	704 287-4805 704 287-4805		whansen318@yahoo.com
Jeff Ritchie	3901 Piney Rd	Morganton	828 438-1720	nucs/queens	
Jimmy Brooks	126 Cedar Lake Farm Rd	Cherryville	704 477-6242	nuc/queens-russian	cj99brooks@hotmail.com
Chad Williamson	907 Tot Dellinger Rd	Cherryville	704 530-7489	nuc/queens-vsh	blackrockfarms@aol.com

New Members & Renewals

New Member ☐ **Renewal** ☐ **Membership #:** _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____

Phone: _____

County of Residence: _____ Local Chapter: _____

1 year dues: NCSBA (state) $15 + LCBA (local) $5 = **$20 total**

You can only be listed under one local chapter in NCSBA "Yellow Book" membership directory. If you choose to be designated **"at-large"** with no chapter affiliation, **check here:** ☐

I want to receive the NCSBA quarterly ***BEE BUZZ*** newsletter by (check only **ONE**):

Email ☐ US Mail ☐ NONE (I don't want it) ☐

I want to receive notices of bee-related **EDUCATIONAL** opportunities by email: YES ☐ NO ☐

I want to receive bee– and beekeeping-related **SOLICITATION** emails: YES ☐ NO ☐

This form may be turned in during our monthly meetings to the treasurer or by sending with payment to:

Eddie White
6576 Lineberger Road
Sherrills Ford, NC 28673

Make checks out to LCBA or Lincoln County Beekeepers association